University of Strathclyde Glasgow

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Useful Learning since 1796

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Enhancing university learning and teaching in an <mark>AI-enabled world</mark>

University of Strathclyde | British Council Jordan | AQACHEI

Amman, Jordan

28 May 2024

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Enhancing university learning and teaching in an AI-enabled world

- What is Gen-AI and what can it *actually* do?

- How will the use of Gen-AI change learners and learning in higher education?

- How will the use of Gen-AI transform your teaching?

- What will need to change in our approach to assessment?

Later?

- Next steps for individuals, programme teams, institutions...and the sector?
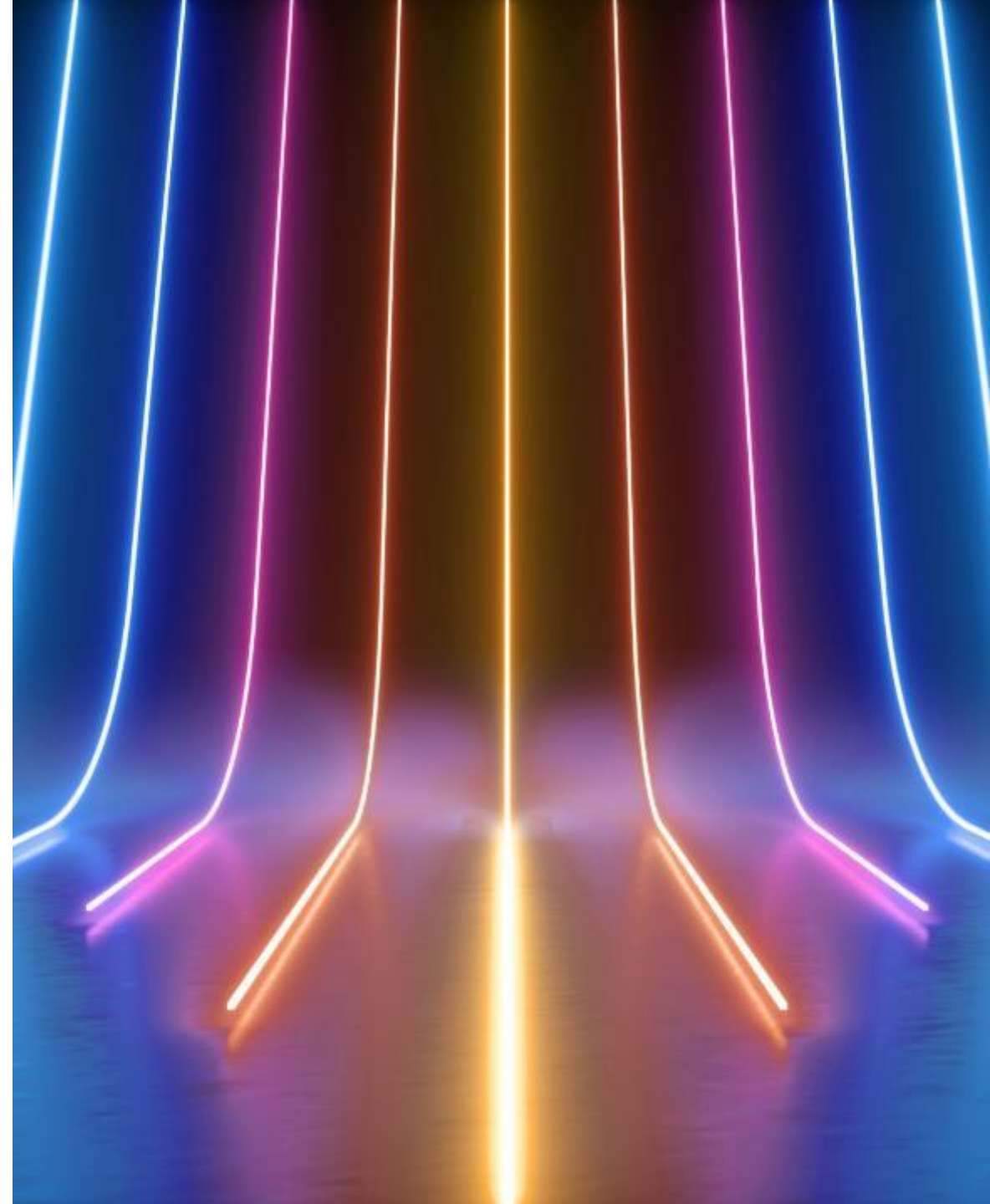
What is Gen-AI and what can it *actually* do?

Key questions

1. What is Gen-AI?

2. What can (and can't) Gen-AI do?

3. What are the major challenges we need to be aware of?

What is Gen-AI?

A *type* of AI which uses a large language model to generate something 'new' in response to a prompt.

"... potentially capable of imitating or even exceeding human cognitive capacities, including sensing, language interaction, reasoning and analysis, problem-solving, and even creativity..."

UNESCO, 2023

"To me, AI isn't just a thing - it's the only thing. It's the thing that changes all the other things."

" My concern… is that universities are sleep walking. Meetings are being held to understand how to prevent cheating with AI. But **very few are seeing the full opportunity where AI allows advancement on many promised innovations**: mastery learning, competency based education, learner profiles, true personalised learning. I'm surprised that AI is generally being treated as peripheral.

Higher education **should be in a panic**...or a frantic race to adopt and deploy this fascinating technology (perhaps more impactful than the industrial revolution)."

George Siemens

Professor of Psychology at the University of Texas at Arlington and Professor and Director of the Centre for Change and Complexity in Learning at the University of South Australia

Cited in *How can edtech address some of the greatest challenges facing HE leaders?*, Emerge/Jisc, 2023.

What can Gen-AI-do?

- Uses existing data, computing power and training to create 'new' text, images, sound, video, code, solve problems, write poetry, etc...

- Impressive but caution is needed and context and 'domain knowledge' still matter.

- Generally works in a non-deterministic way... can't be sure output is either reliable or repeatable.

Which of the images below is a photo of a real cheetah and which was created using AI?
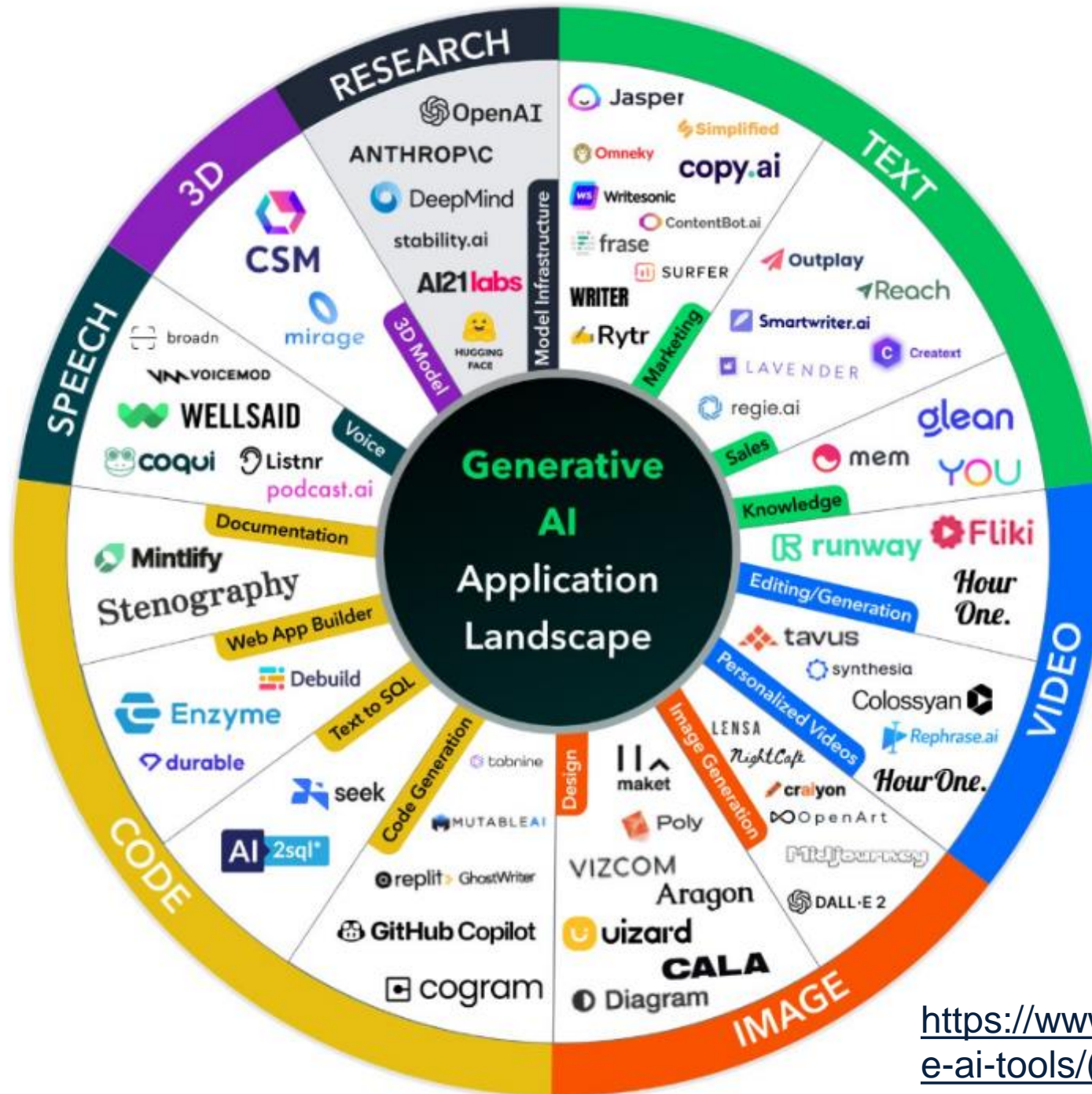
There is a lot of 'AI' out there now

… there are **9861** entries on *There's an AI for that* database

...and 5536 on the *Futurepedia* directory

https://www.rapidops.com/blog/generative-ai-tools/(N.B. from March 2023...)

Gen-AI Bingo!

Activity

1. Take your Gen-AI BINGO sheet

2. Go around the room speaking to colleagues (10 mins)

3. Shout BINGO! If you complete a line.

4. When you return to your table, discuss the example that most interests you with the person next to you (10mins)
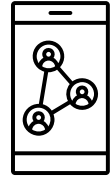
Widely **available**
(but not for *everyone everywhere*)

Impractical to ban or ignore
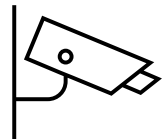(though regulation is possible.. but global flows of people and ideas. How sustainable is it?)

Will get 'better' and people will get better at using it
(more efficient, effective, etc.)

Increasingly **'everyday'**
(e.g.MS Copilot, Poe App, etc.)

Often **can't be detected**
(there are significant practical and fundamental issues with 'detection')

Will likely **impact most our work**
in some way

There are some big challenges facing us all

SPEED OF CHANGE

SUSTAINABILITY

EQUITY & ACCESSABILITY

TRANSPARENCY & SECURITY

ETHICS & INTEGRITY

ACCURACY & BIAS

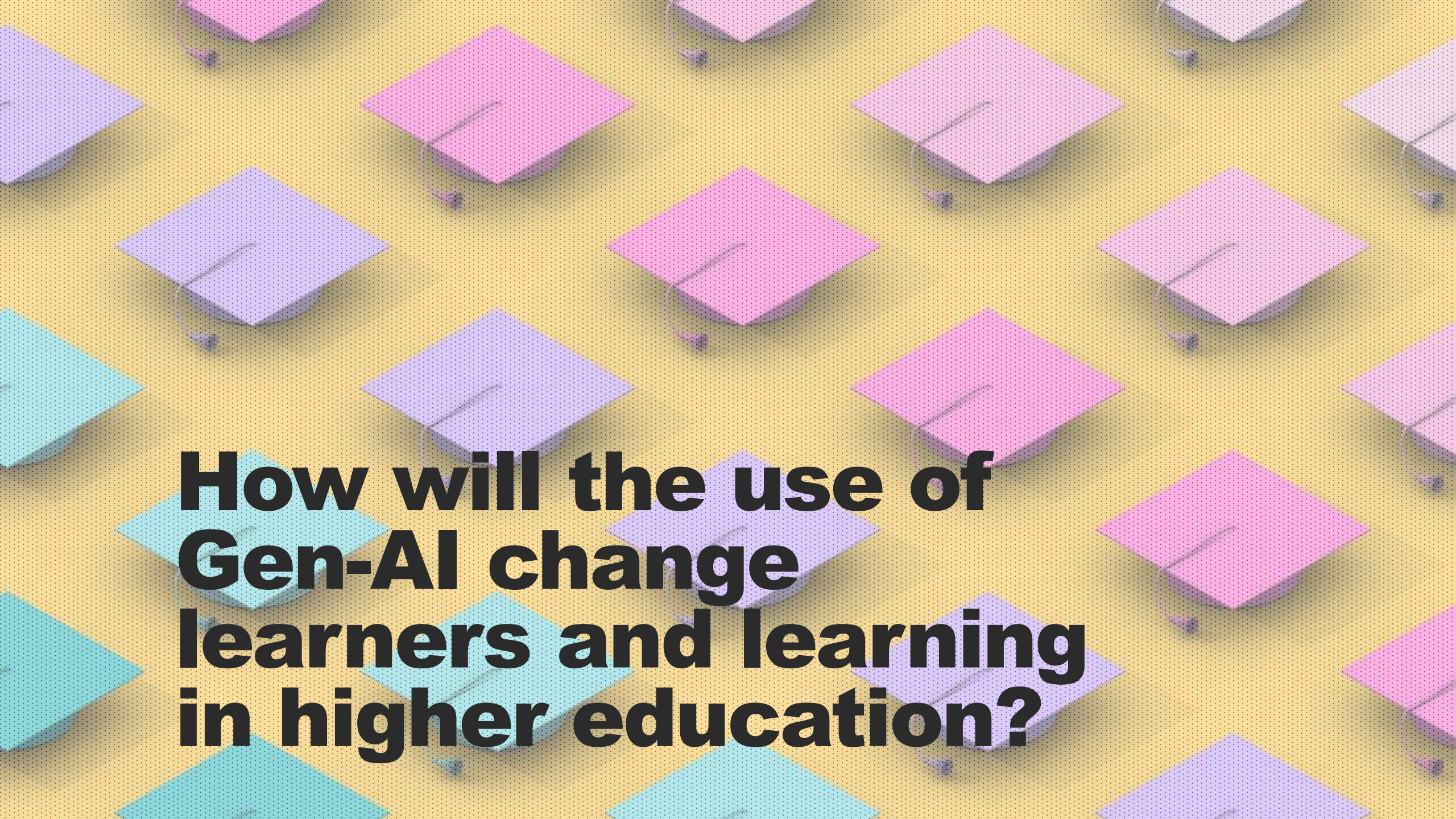COPYRIGHT & IP
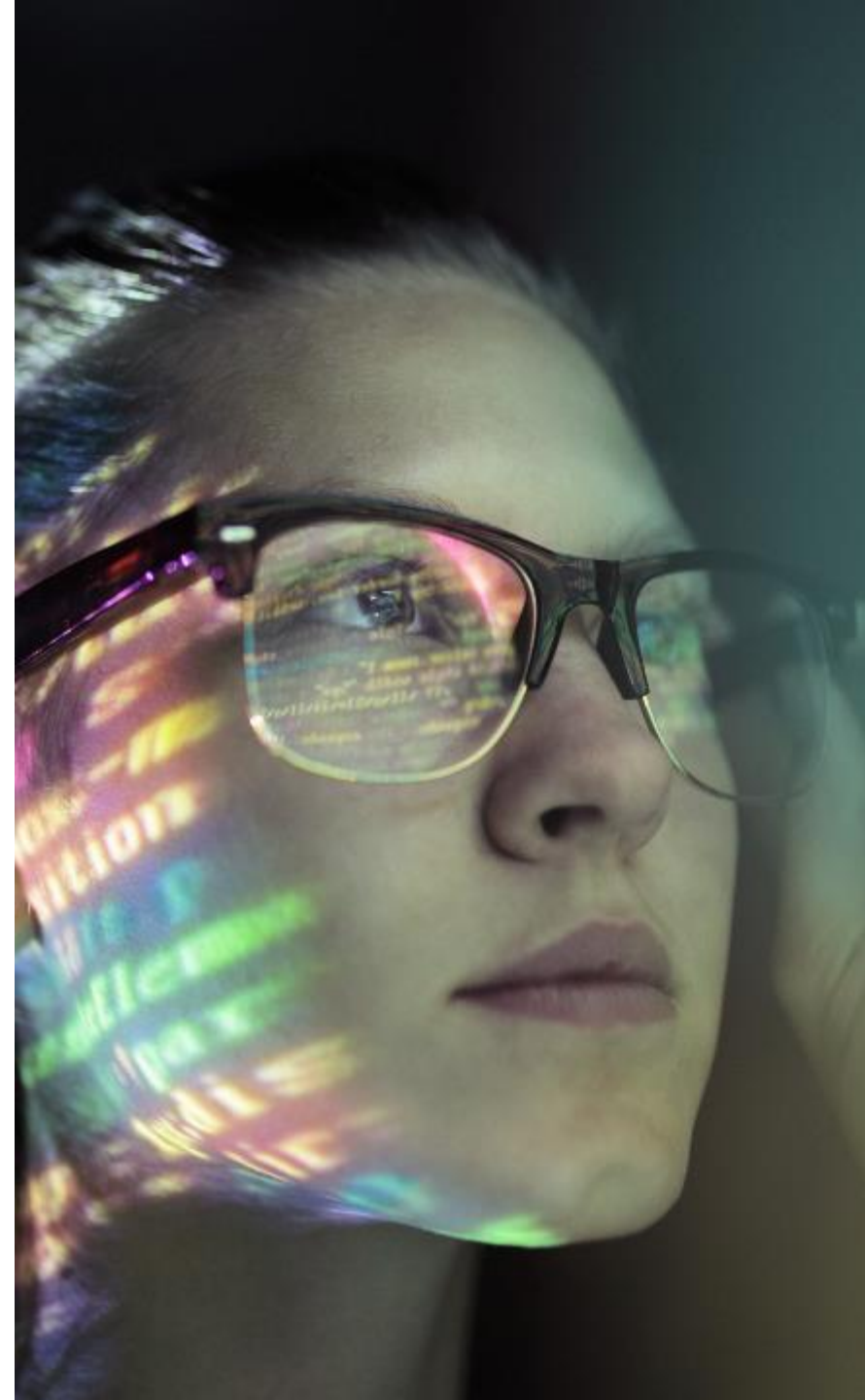
How will the use of Gen-AI change learners and learning in higher education?

How will the use of Gen-AI change learners and learning in higher education?

Key questions

1. Are learners using Gen-AI?

2. What are they doing with Gen-AI?

3. Supporting Students' AI literacies

4. What does the widespread use of Gen-AI mean for learning and 'being a graduate' in your discipline?

X

Are students using Gen-AI?

50%

Proportion of students reporting that they regularly use Gen-AI

Tyton Partners/ Turnitin, 2024

53%

Proportion of students reporting Gen-AI use

HEPI 2024,

63%

Proportion of students reporting they use AI-based tools for studying

von Garrel and Mayer, 2023

"

Bearman et al (2024), p.2.

"In March 2023, a survey of 1000 US college students described that a substantial minority were using AI tools like ChatGPT within their studies... By November 2023, a survey of 1000 US college students showed that 56% used AI tools to complete assignments or examinations."

What are students using Gen-AI for?

5%

Proportion of students likely to be cheating with Gen-AI.

HEPI, 2024

72%

Proportion of students who want to know how to use Gen-AI ethically.

Inside Higher Ed, 2024

70%

Proportion of students who don't support using ChatGPT for whole submission

Johnston et al (2024)

63%

Proportion of 18-24 y/o using Gen-AI at work

Accenture, 2024

"

Eaton, 2023, p.3.

"The first principle of postplagiarism is that hybrid writing co-created by human and artificial intelligence is becoming prevalent and will soon become the norm. **Text generated by artificial intelligence tools is not static. It can be edited, revised, reworked, and remixed.** The result can be a product that is neither fully written by a human, nor by an AI, but one that is hybrid. Trying to determine where the human ends and where the artificial intelligence begins is pointless."

If students are using AI can we detect it? (AI detectors)

In the UK, most universities are not using AI detectors. At Strathclyde, we have no plans to use AI detection tools.

Why not?

- Not allowed to process students work using these tools
- 'Black boxes'
- Ineffective and unreliable
- Relatively easy to evade
- Bias against non-native English writers
- Non-deterministic outputs... not clear how they could ever 'work'.
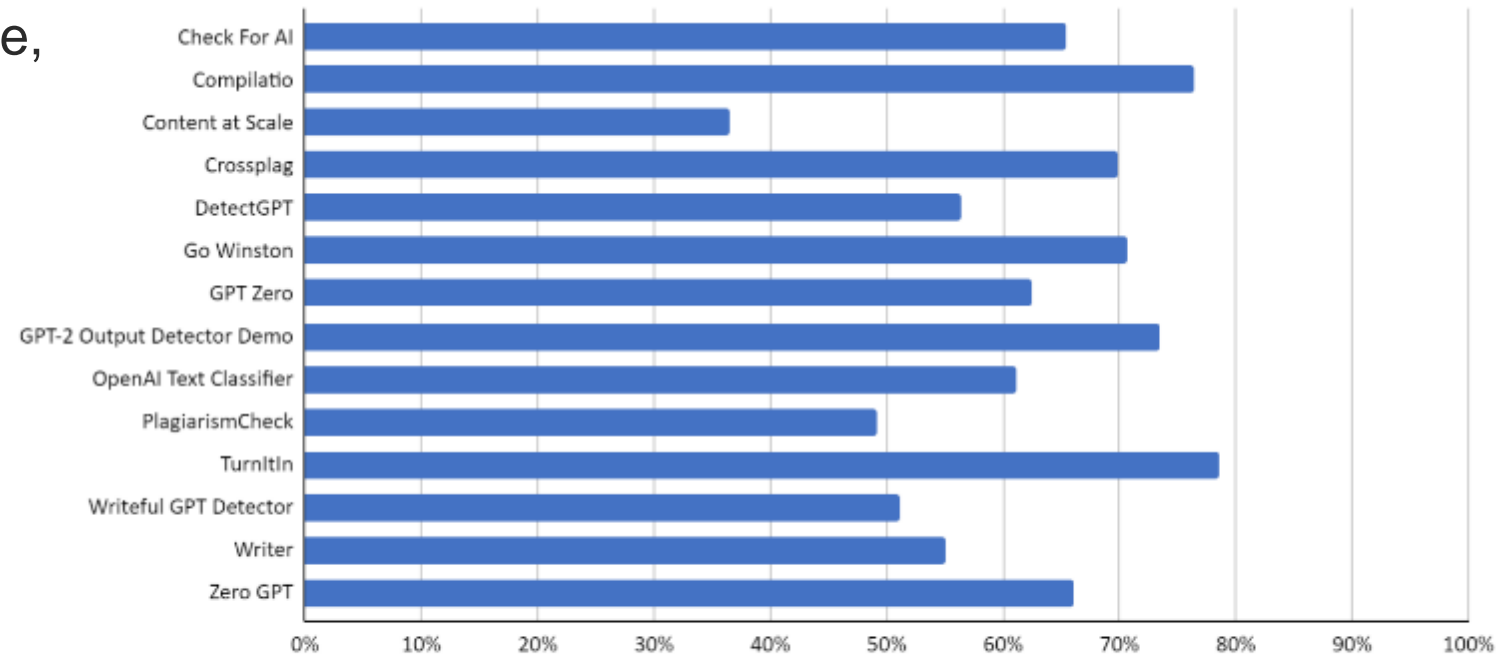
Figure 1: Overall accuracy for each tool calculated as an average of all approaches discussed

Source: Weber-Wulff *et al* (2023, p. 15)

If students are using AI can we detect it? (Human detectors)

↑ Invented references; inclusion phrases like "As a Large Language Model" or "Certainly, here is..."; self-declaration or acknowledgment.

→ Sound grammar, spelling and punctuation, effective structure, on topic, but lacking 'argument' or 'point'.

↓ Predictable sentence or paragraph structure and length; overuse of particular words (e.g. 'the' or 'however'); lack of typos; 'sense' or 'feeling'.

How can we help students to use AI well?

Enhancing AI literacies and skills

Know & understand AI - Know the basic functions of AI and how to use AI applications

Use & apply AI - Applying AI knowledge, concepts, and applications in different scenarios

Evaluate & create [with or in] AI - Higher-order thinking skills (e.g., evaluate, appraise, predict, design) with AI applications

AI ethics - Human-centered considerations (e.g., fairness, accountability, transparency, ethics, safety)

(Ng. et al, 2019, p.4)

https://ecampus.oregonstate.edu/faculty/artificial-intelligence-tools/literacy/
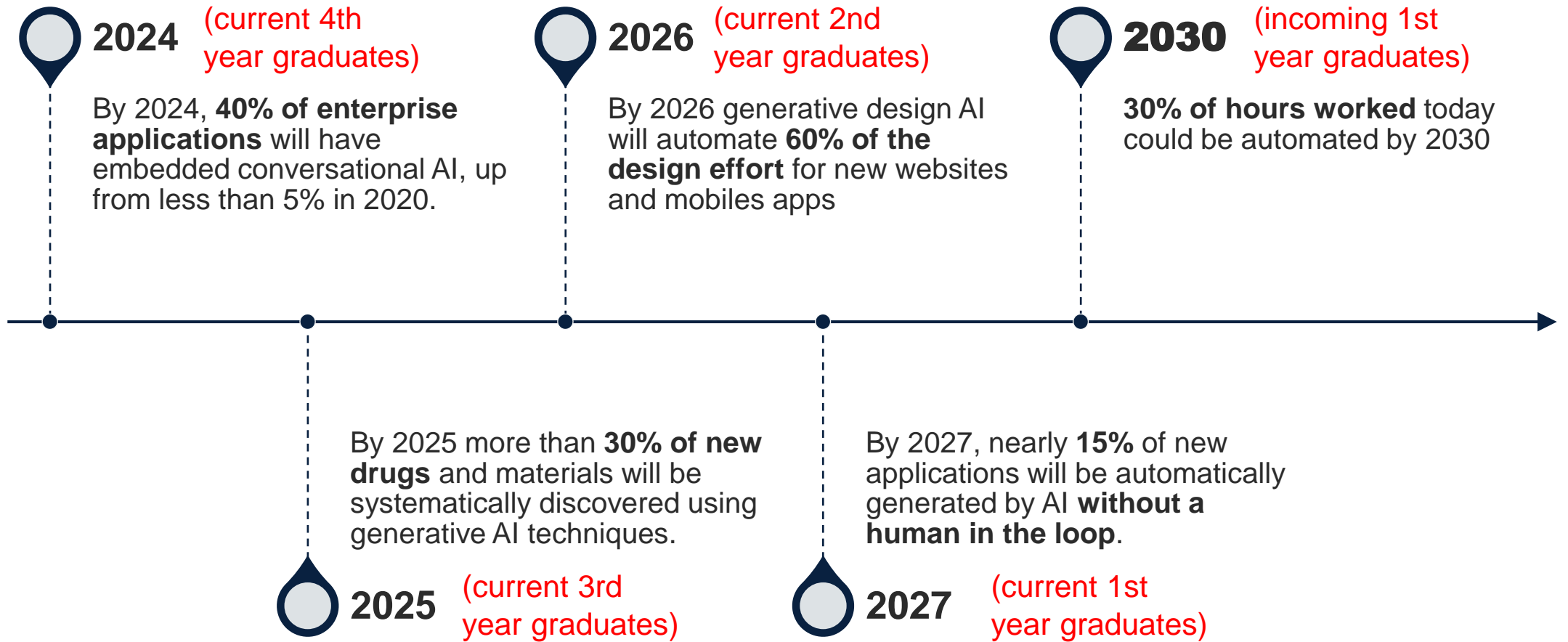
Critical AI literacy

1. Provide clear, honest and constructive guidance

2. Build it into the curriculum

3. Model critical thinking on Gen-and its application

4. Maintain focus on core competencies and skills (general and discipline-specific)

… Plus ça change, plus c'est la même chose

- Criticality

- Information literacy

- Research skills

- Core competencies and skills

What is going to change for *our graduates*?

2024 (current 4th year graduates)

By 2024, **40% of enterprise applications** will have embedded conversational AI, up from less than 5% in 2020.

2026 (current 2nd year graduates)

By 2026 generative design AI will automate **60% of the design effort** for new websites and mobiles apps

2030 (incoming 1st year graduates)

30% of hours worked today could be automated by 2030

By 2025 more than **30% of new drugs** and materials will be systematically discovered using generative AI techniques.

2025 (current 3rd year graduates)

By 2027, nearly **15%** of new applications will be automatically generated by AI **without a human in the loop**.

2027 (current 1st year graduates)

Based on work by Gartner, 2023

Discussion:

# How will Students' use of Gen AI change what you teach and your curriculum design?

Discuss the following questions in pairs and then groups:
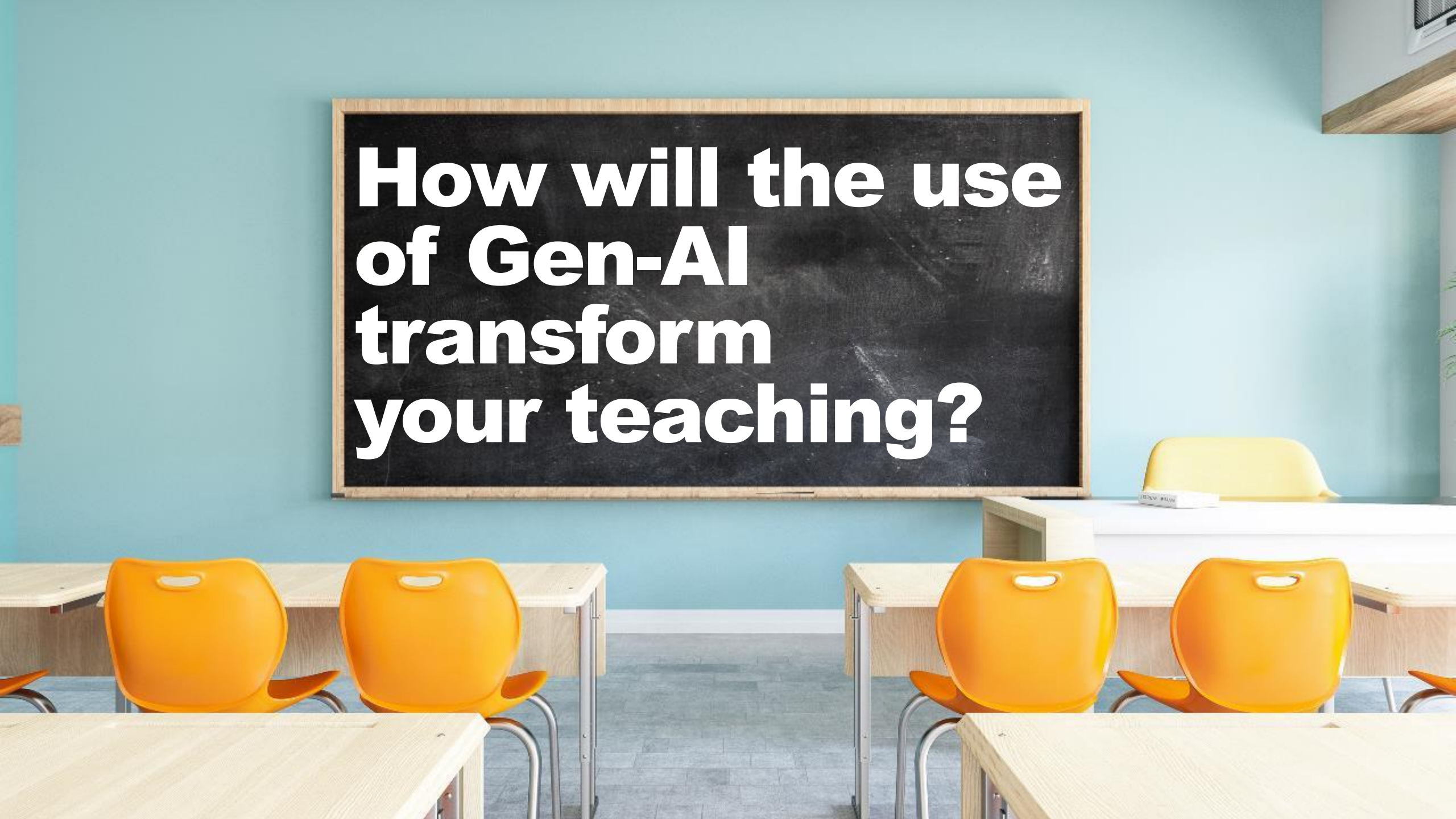
1. Assuming your students are using Gen-AI tools, and will likely see them integrated into the industries and sectors they enter after graduation, what is likely to change in your curriculum and approach to teaching?

2. What mechanisms do you have in place to monitor or maintain awareness of industry, society, applicants, and other partners' expectations of graduates' skills and attributes?

Learning, teaching and assessment challenges

"…there should be no mistake that what's coming over the hill is going to require a **far more fundamental change** in terms of how universities operate than anything that was prompted by Covid – and at an **even faster pace**."

Professor Liz Bacon (Principal, Abertay University) in a blog for Universities Scotland
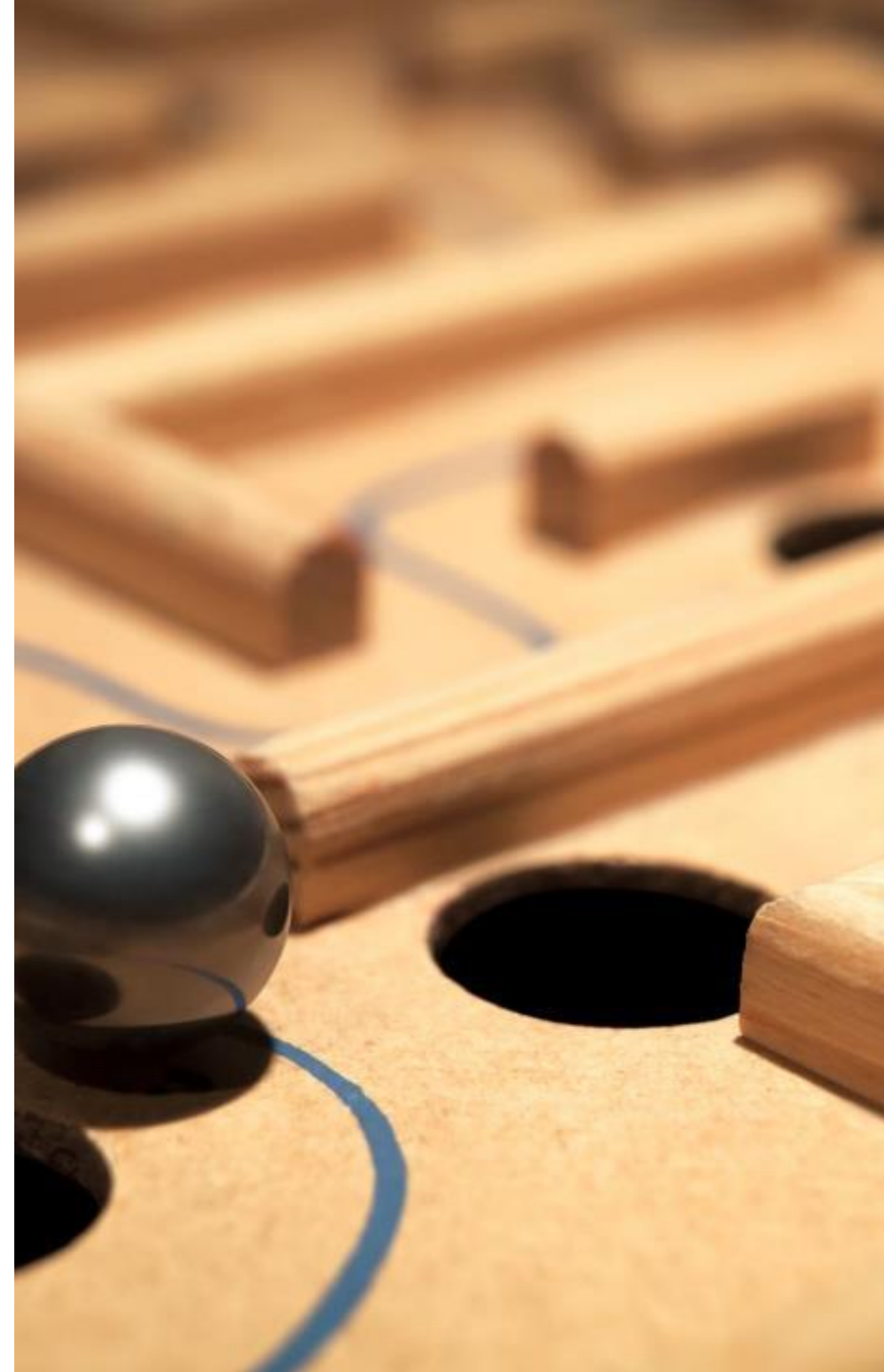
How will the use of Gen-AI transform your teaching?

How will the use of Gen-AI transform your teaching?

Key questions

1. Gen-AI as a disruptor and influence

2. What role(s) could Gen-AI play in teaching practice?

3. (Changing) practice pitches!

4. Developing an ethics of AI use

Why *will* we be using Gen-AI in the classroom?

'Inherent' Drivers: latent power, embeddedness/everydayness, impact, social and technological change

Transforming teaching: Promise of efficiency, on-tap creativity and criticality, value added, graduate attributes

Transformed learning and learners: personalisation, immediacy, efficiency, on-tap creativity and criticality, value-added, graduate skills and attributes
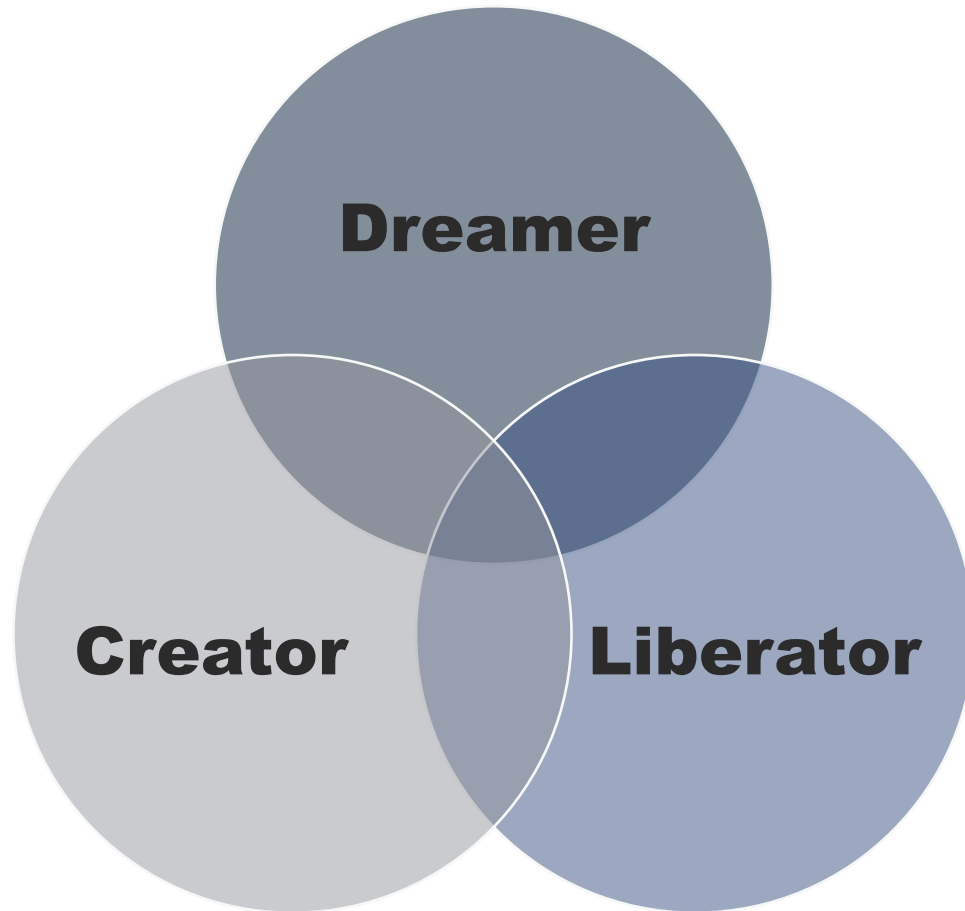
What are the opportunities?

- Personalisation
- Increased impact
- Innovation
- Greater inclusivity
- Scalability
- New graduate attributes
- Better data and insights

Role[6]	Description	Example of implementation
Possibility engine	AI generates alternative ways of expressing an idea	Students write queries in ChatGPT and use the Regenerate response function to examine alternative responses.
Socratic opponent	AI acts as an opponent to develop and argument	Students enter prompts into ChatGPT following the structure of a conversation or debate. Teachers can ask students to use ChatGPT to prepare for discussions.
Collaboration coach	AI helps groups to research and solve problems together	Working in groups, students use ChatGPT to find out information to complete tasks and assignments.
Guide on the side	AI acts as a guide to navigate physical and conceptual spaces	Teachers use ChatGPT to generate content for classes/courses (e.g., discussion questions) and advice on how to support students in learning specific concepts.
Personal tutor	AI tutors each student and gives immediate feedback on progress	ChatGPT provides personalized feedback to students based on information provided by students or teachers (e.g., test scores).
Co-designer	AI assists throughout the design process	Teachers ask ChatGPT for ideas about designing or updating a curriculum (e.g., rubrics for assessment) and/or focus on specific goals (e.g., how to make the curriculum more accessible).
Exploratorium	AI provides tools to play with, explore and interpret data	Teachers provide basic information to students who write different queries in ChatGPT to find out more. ChatGPT can be used to support language learning.
Study buddy	AI helps the student reflect on learning material	Students explain their current level of understanding to ChatGPT and ask for ways to help them study the material. ChatGPT could also be used to help students prepare for other tasks (e.g., job interviews).
Motivator	AI offers games and challenges to extend learning	Teachers or students ask ChatGPT for ideas about how to extend students' learning after providing a summary of the current level of knowledge (e.g., quizzes, exercises).
Dynamic assessor	AI provides educators with a profile of each student's current knowledge	Students interact with ChatGPT in a tutorial-type dialogue and then ask ChatGPT to produce a summary of their current state of knowledge to share with their teacher/for assessment.

A model for thinking through the opportunities: What roles can Gen-AI play in transforming teaching?

Three emergent Gen-AI assistants emerging

1. A **dreamer** *(or 'thinker')*

2. A **creator** *(or 'producer')*

3. A **liberator** *(or 'task completer')*

Dreamer

Creator

Liberator

Borrowed and adapted from Stanford University

The Liberator

A completer of tasks, lifter of loads, bearer of drudgery

- Summarisation
- Data Cleansing
- Progress Tracking
- Content Moderation
- Synthetic Data,
- Review and Feedback

Gen-AI as Liberator

- Summarisation

- Data Cleansing

- Progress Tracking

- Content Moderation

- Synthetic Data

- Review and Feedback

https://www.emilynordmann.com/post/using-chatgpt-to-create-teaching-materials-data-simulation-mcqs/
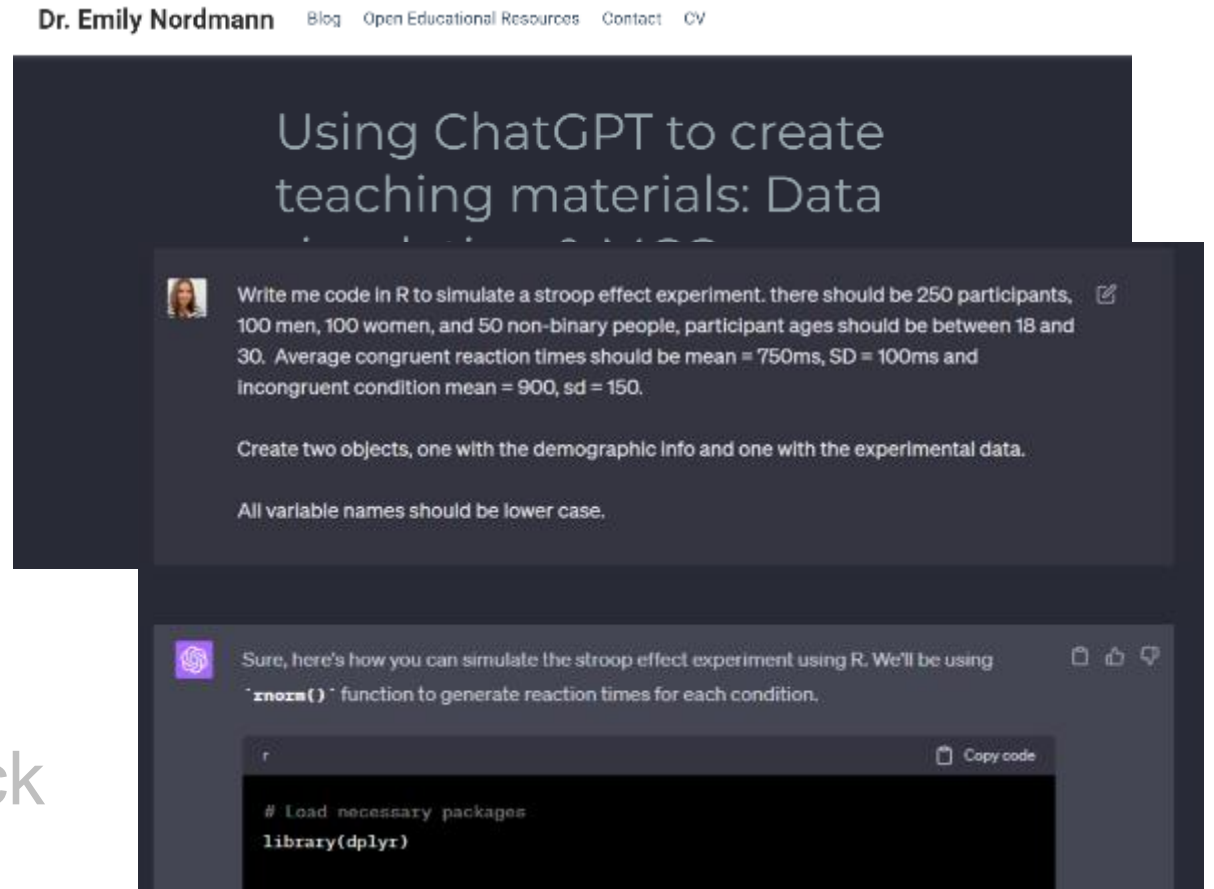
The Dreamer

A thinker, a sounding board for ideas, an expander of notions

- Brainstorming
- Concept expansion
- Concept mapping
- Collaborative Writing
- Scenario building
- Simulating discussions

Gen-AI as a Dreamer

- Brainstorming
- Concept expansion
- Concept mapping
- Collaborative Writing
- Scenario building
- Simulating discussions

AI as a conversation buddy: Is it about the questions we ask?

Author:	Contact details:
Chrissi Nerantzi	c.nerantzi@leeds.ac.uk
Role:	Institution/organisation:
Educator	School of Education, University of Leeds
Context:	Tool(s) used:
Education, Professional Development, Any Discipline	ChatGPT

My idea

Exploring the use of AI as a conversational buddy to develop critical reading and inquiry skills through developing our own questioning, challenge and be challenged.

What I aim to achieve

To create opportunities for conversational learning using AI, in this case ChatGPT or similar tools, as a conversation buddy. Could this type of conversations help us develop and sharpen our socratic questioning techniques, and open up to diverse perspectives? Could it be a way to practise active listening, critical reading and deep reflection? Could it open our minds to explore new connections

and possibilities through questions? Could our own questions help us question our own beliefs, positionality and challenge our own assumptions and study contradictions? Could this approach help us develop our skills in creating safe and non-judgemental spaces for conversations in the spirit of Socratic questioning (Paul & Elder, 2007)? Are responses only as good as the questions we ask? And what are the implications if this is the case?

Where the inspiration comes from

From a need to learn to question, challenge and embrace diverse perspectives to construct an informed academic argument and remain curious about the world.

Extract of a conversation with ChatGPT about inclusive feedback. Access Chrissi Nerantzi's development space to follow the full conversation.

The Creator

A producer of artefacts, a destroyer of blank screens, builder of content.

- Lesson Plan Generation
- Project Planning
- Content Personalisation
- Accessibility Design
- Interactive Experiences
- Curriculum Mapping & Intended Learning Outcomes
- Assessment and Feedback material

Gen-AI as a Creator

- Lesson Plan Generation

- Project Planning

- Content Personalisation

- Accessibility Design

- Interactive Experiences

- Curriculum Mapping & ILOs

- Assessment and Feedback material

https://mcompton.uk/2023/08/05/creating-a-marking-rubric-using-chatgpt/
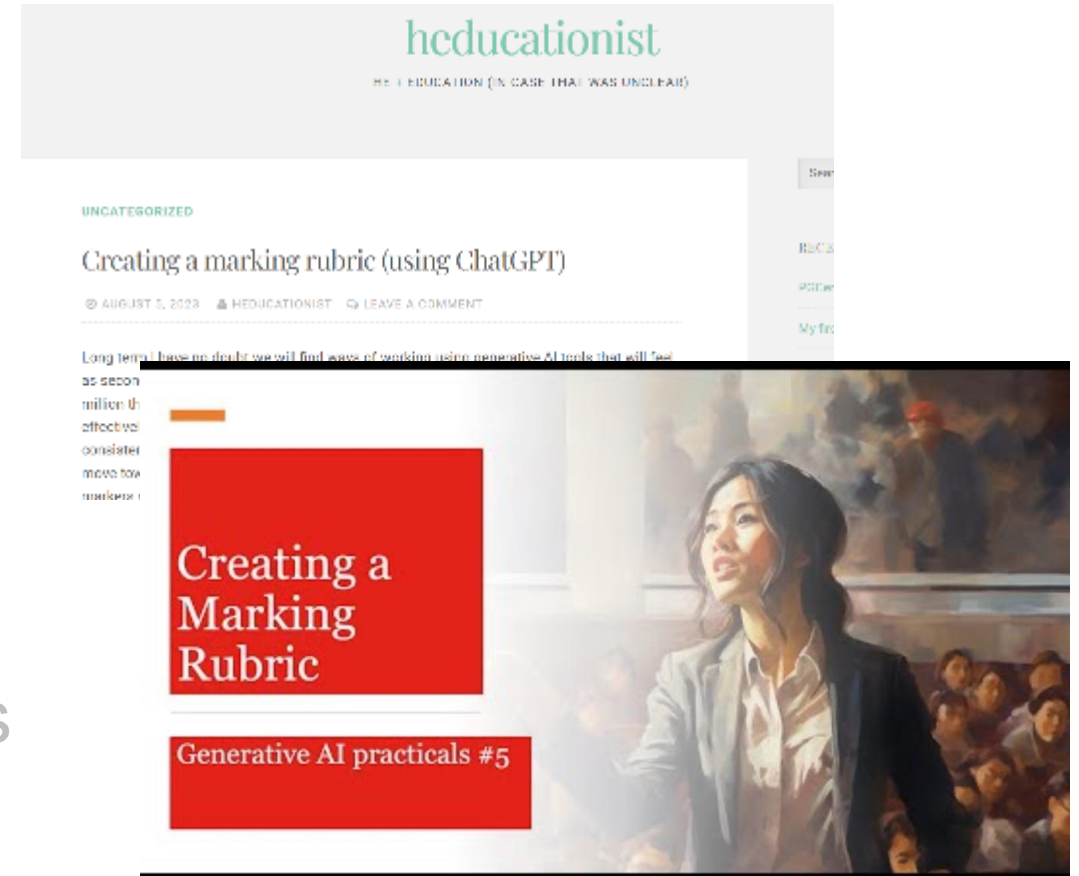
Activity

How could you use Gen-AI as a Dreamer, Creator and/or Liberator?

- With the person next to you, discuss one way you are (or plan to be) using Gen-AI in your teaching practice or teaching support activity.

- Could you use Gen-AI on your smart device to help you with this?

- Pick one of your examples and develop a short (2 min) pitch that could be shared verbally with the wider group.

Some critical questions for now…

- Ask not what can Gen-AI do to and for us… but how will using it change how we approach our work (e.g. how we *read, what we expect of students, etc.*)?

- How does the availability of these tools change where we start from in a task, where we end up, and the steps we take along the way?

- Where and how can these tools really enrich our work and enhance its impact?

- Where are they going to add value, allow us to go in different directions, find different ways to our goals? When/where will they be a distraction?
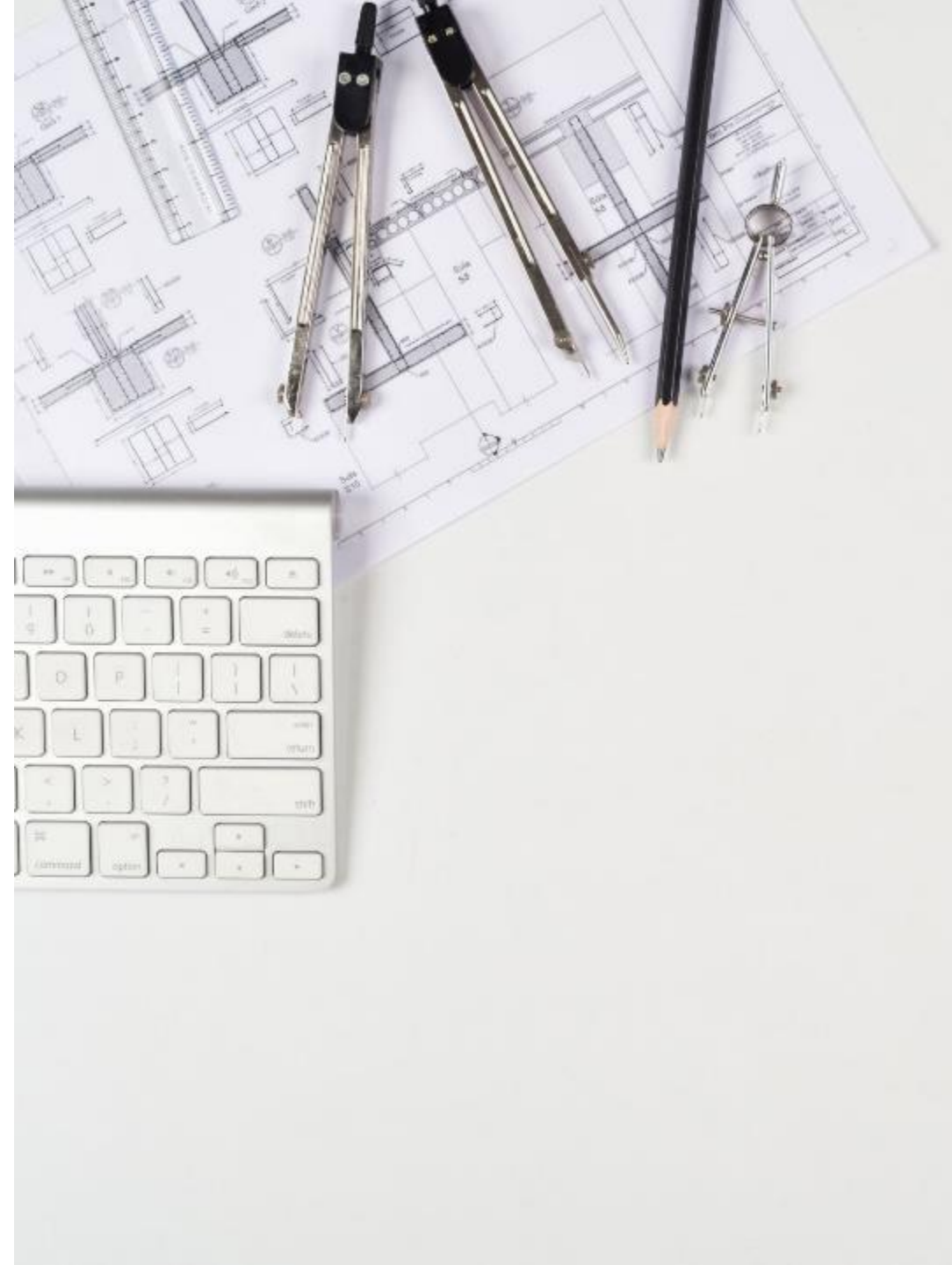
What will need to change in our approach to assessment?

What will need to change in our approach to assessment?

Key questions

1. What is assessment for?

2. What impact is Gen-AI going to have on how we assess?

3. How can you audit and change your assessment practices to better meet the demands of a Gen-AI enabled world?

The importance of assessment

"Nothing that we do to, or for, our students is more important than our assessment of their work and the feedback we give them on it. The results of our assessment influence our students for the rest of their lives and careers..."

(Race _et al_, 2005: xi)
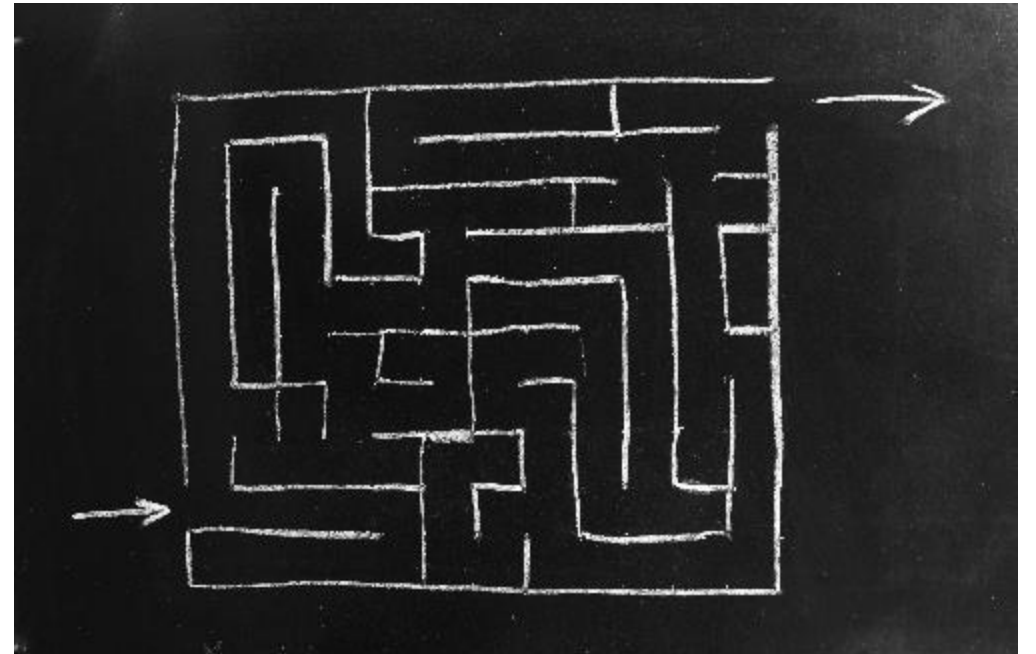
What is assessment for?

What do we *think* is happening when we assess students?

VALIDATION (GRADES, PROGRESSION, CERTIFICATION, ETC.)

PRACTISE (HONING KNOWLEDGE AND SKILLS)

PRACTICE (REINFORCING EXPECTATIONS OF CONDUCT)

What purpose does assessment serve?

- Assessment OF Learning = demonstrating achievement

- Assessment FOR Learning = to give feedback on learning and teaching

- Assessment AS Learning = to self-regulate and critically evaluate
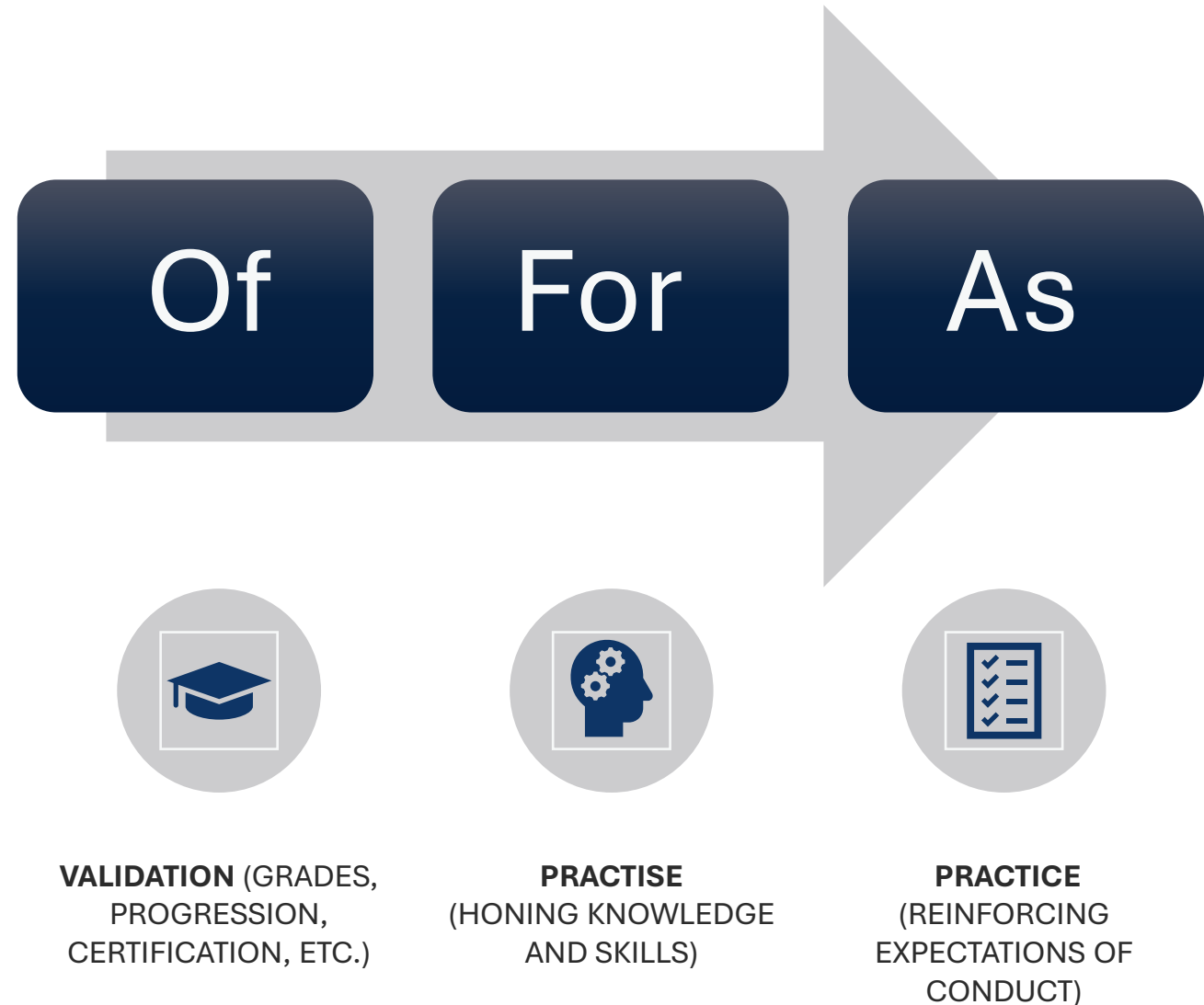
See National Forum for the Enhancement of Teaching and Learning in Higher Education (www.teachingandlearning.ie)

Of   For   As

VALIDATION (GRADES, PROGRESSION, CERTIFICATION, ETC.)

PRACTISE (HONING KNOWLEDGE AND SKILLS)

PRACTICE (REINFORCING EXPECTATIONS OF CONDUCT)

Pedagogic (what really drives learning?)

Industry (graduate attributes, employability, relevance)

Old and new drivers of assessment change

Pressure building for change. Range and mix of drivers.

Broadly... A desire for more **authentic**, **inclusive**, and **secure forms of** assessment. Meeting evolving expectations and challenges

Social, Legal, Ethical (expectations and requirements)
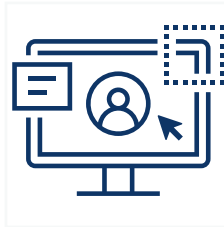
Technological (innovations and opportunities, expectations)

Also... how sustainable are staff and student (assessment) workloads?

Gen-AI impact on Assessment

Gen-AI is here, but what has really changed?

Arguably we have the same challenges, just new impetus and focus?

ACADEMIC INTEGRITY   COGNITIVE OFFLOADING   PRACTISE AND PRACTICE

Without changing assessments you can make a difference by...

1. Talking to your students about their use of AI

2. Providing clear guidance on AI

3. Building critical AI literacy into your practice

4. Auditing your assessments

How can you audit your assessment?

Assessment formats

>>>> Decreasing academic integrity risk >>>>

Using openly available texts ·····→ Using paywalled texts (e.g. library resources)

Monomodal (single format e.g. text) ·····→ Multimodal (e.g. text + image)

Assess submitted work ·····→ Assess real time performance

Single discrete assessment ·····→ Longitudinal assessment

Monologic ·····→ Dialogic

Assessment of product vs process

Decreasing academic integrity risk

Assess product only ....→ Include process in assessment

Process hidden from assessor ....→ Process visible to assessor

Students work as individuals ....→ Students work as teams
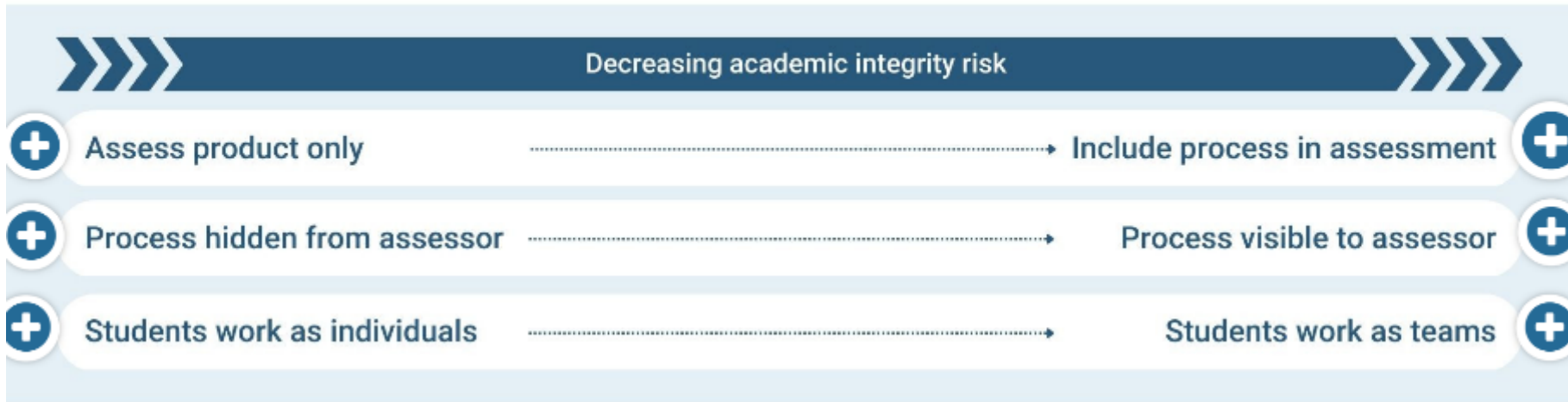
Forms of knowledge assessed

Decreasing academic integrity risk

Assess lower-order thinking (e.g. remembering) ....→ Assess higher-order thinking (e.g. evaluating or creating)

Assess factual and abstract knowledge ....→ Assess contextualised and personalised knowledge
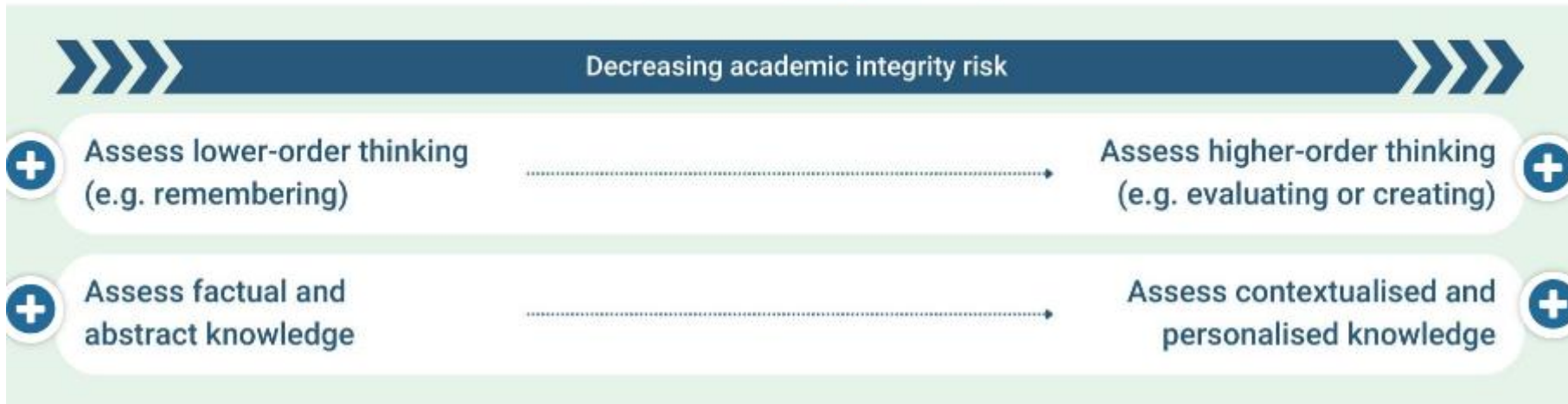
Monash University Gen-AI and assessment toolkit

https://www.monash.edu/learning-teaching/teachhq/Teaching-practices/artificial-intelligence/generative-ai-and-assessment

Can students use generative AI tools in assessment activity

Does the use of AI have significant pedagogical implications and enhance learning outcomes?

DECISION

Yes → Yes →

Should there be any restrictions on students' use of AI?

No → No →

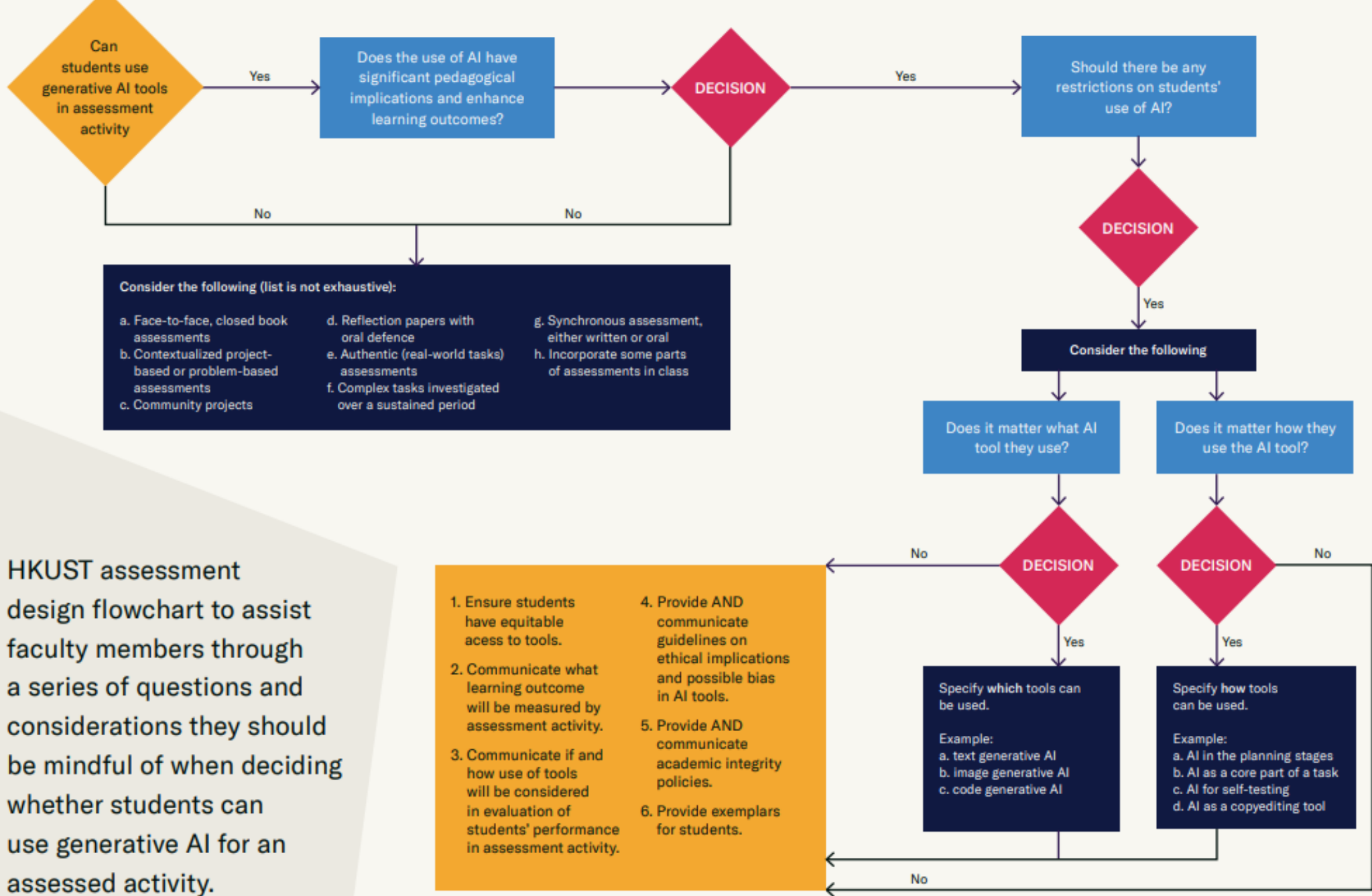**DECISION**

Yes

Consider the following

Consider the following (list is not exhaustive):

a. Face-to-face, closed book assessments
b. Contextualized project-based or problem-based assessments
c. Community projects

d. Reflection papers with oral defence
e. Authentic (real-world tasks) assessments
f. Complex tasks investigated over a sustained period

g. Synchronous assessment, either written or oral
h. Incorporate some parts of assessments in class

Does it matter what AI tool they use?

Does it matter how they use the AI tool?

No → **DECISION**   **DECISION** ← No

Yes   Yes

HKUST assessment design flowchart to assist faculty members through a series of questions and considerations they should be mindful of when deciding whether students can use generative AI for an assessed activity.

1. Ensure students have equitable acess to tools.
2. Communicate what learning outcome will be measured by assessment activity.
3. Communicate if and how use of tools will be considered in evaluation of students' performance in assessment activity.

4. Provide AND communicate guidelines on ethical implications and possible bias in AI tools.
5. Provide AND communicate academic integrity policies.
6. Provide exemplars for students.

Specify **which** tools can be used.

Example:
a. text generative AI
b. image generative AI
c. code generative AI

Specify **how** tools can be used.

Example:
a. AI in the planning stages
b. AI as a core part of a task
c. AI for self-testing
d. AI as a copyediting tool

No →   ← No

Activity: Pair discussion

- How vulnerable to AI are your current assessments?

- What do you think the solutions will be in your context?

- What support do you need to help find and action these solutions?

How can you adapt your assessment to make it less vulnerable?

Written coursework

- Increase specificity.

- Focus on process instead of or as well as the product.

- Adjust questions to include evaluation of AI responses.

Exams/time-constrained assessments

- Test your questions with GenAI.

- Avoid factual recall or highly weighted factual recall questions.

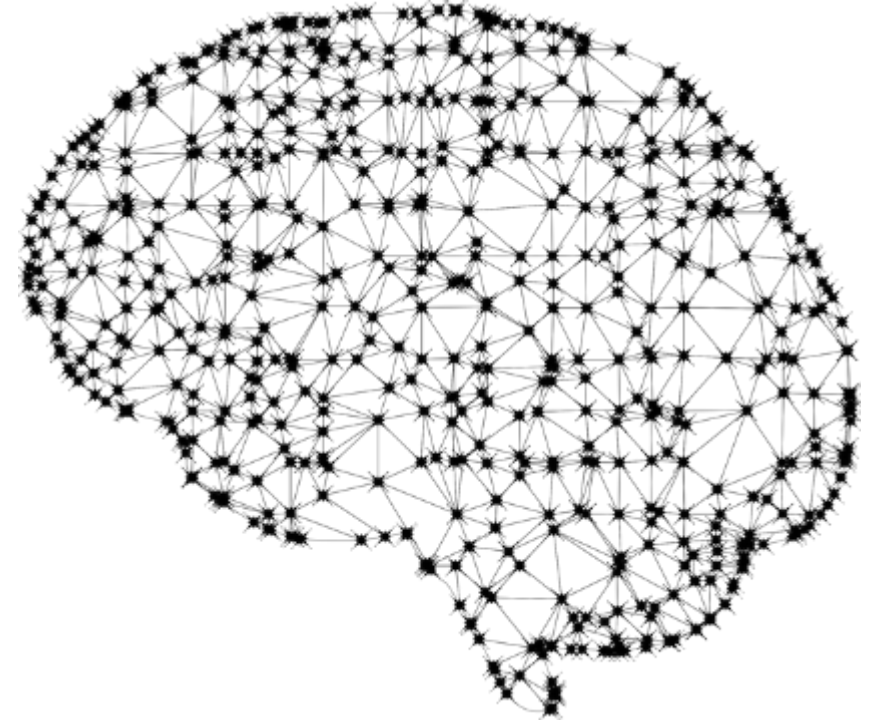- Use multi-step problems.

- Introduce authentic restrictions.

Image by Gordon Johnson from Pixabay

How can you adapt your assessment to make it less vulnerable?

MCQs

- Use a range of presentation formats (images, data files etc)

- Ask for additional 'workings out' or rationale for responses.

- Assertion and reason type

- Ask students to create a bank of questions with answers with rationale for selection.

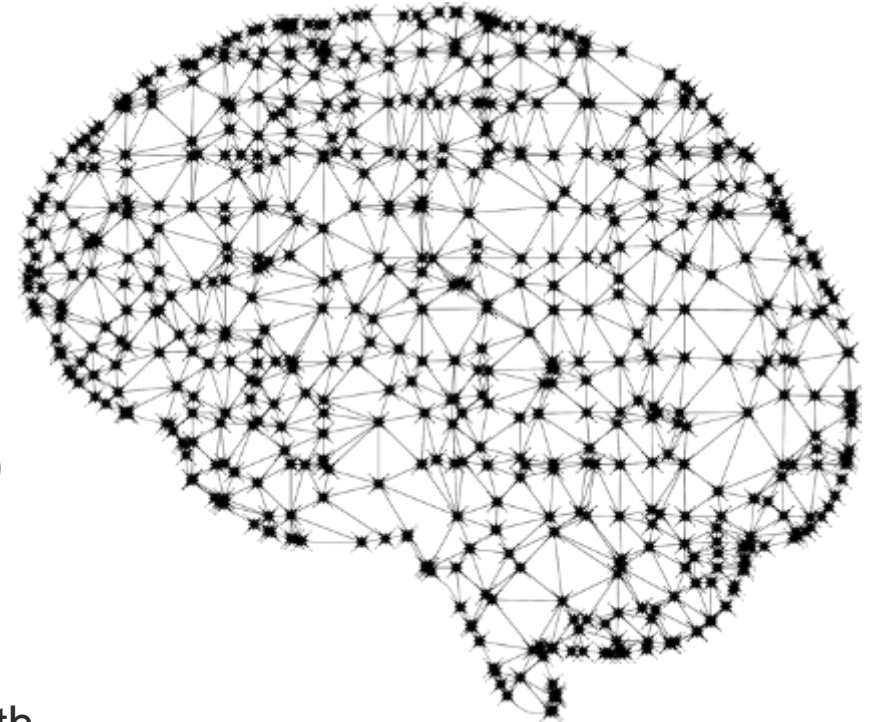- Ask students to submit audio responses with rationale for thinking.

Image by Gordon Johnson from Pixabay

What if you want/need to change your assessment format?

32. Talking poster

Challenge ☆☆☆
Product/performance ☆☆☆☆
Transfer of knowledge ☆☆☆☆
Metacognition ☆☆
Recognisable by stakeholders ☆☆☆
Fidelity ☆☆☆
Feedback/discussion ☆☆☆
Collaboration ☆☆☆
Sustainability impact ☆☆☆
Staff demand ☆☆

Students create a visual display of key ideas relating to specific topics e.g. technologies for energy production, ceramic designs, or methods of early years education. The students then simulate being at a conference by explaining the elements of the poster using a voice-over track. This allows students to articulate the meaning of their visual, something that sometimes feels lacking when looking at a visual alone. The voice-over is a low-pressure way of bringing together visual and verbal presentation skills. The talking posters can then be shared in a virtual repository. This can be done individually or in groups. Overcome some of the challenges by directing students to basic graphics and audio software.

19. Infographic

Challenge ☆☆☆
Product/performance ☆☆☆
Transfer of knowledge ☆☆
Metacognition ☆☆☆☆
Recognisable by stakeholders ☆☆☆☆
Fidelity ☆☆☆
Feedback/discussion ☆☆☆
Collaboration ☆☆
Sustainability impact ☆☆☆☆
Staff demand ☆☆

Students can be asked to create an infographic in relation to a specific theme or a topic. This approach requires critical engagement with data sources, effective communication and data visualisation. Students must select and present data by making a series of design choices. If this is new ground for you as the tutor, consider boosting your skills with a two- or three-week MOOC on this topic. As a supplement to the infographic students may also produce a narrative to explain how they made the decisions about what to include and exclude, and how to combine data sets. This could be written or in a recorded form. Infographics can work across the disciplines from American Studies to Zoology!

50. Annotated bibliography and search protocol

Challenge ☆☆☆
Product/performance ☆☆
Transfer of knowledge ☆☆
Metacognition ☆☆☆☆
Recognisable by stakeholders ☆☆
Fidelity ☆☆
Feedback/discussion ☆☆☆☆
Collaboration ☆☆☆
Sustainability impact ☆☆
Staff demand ☆☆

Annotated bibliographies can be a useful way to connect students to their reading; students say what they have read and comment on it - drawing on their interests, beliefs or experiences. It is authentic to the individual.

Adding a search protocol to an annotated bibliography requires students to actively set out 'how' they found information too.

This extra step can be discussed in class to support the development of information search skills (e.g. Boolean searches). This idea borrows from the practice of systematic review by making the research process transparent. Information searching is a critical skill for many professions, whilst the accompanying annotated bibliography encourages a very personal engagement with key topics.

19 Simulations

What are they?
In some kinds of simulations, students are given a variety of documentation, often in the form of case studies, with which they have to engage and then undertake activities to demonstrate their understanding and effective usage of the material. For example, the Harvard Case Method has since the 1950s been very widely used in Management programmes, where a written description about a real company facing specific business problems is discussed, often in large groups of students, prior to forming the basis of an individual written assignment (Bennett, 1976). In other kinds of simulations, pre-qualification surgeons, for example, are asked to use remote surgery equipment in virtual settings, enabling them to practise prior to them using this equipment with live patients under supervision. Similarly, pilots learning to fly new planes use simulators to enable them to become familiar with equipment they will subsequently use, alongside a more experienced pilot.

What are the benefits?
- Simulations can provide safe occasions to enable novices to gain confidence and expertise in life-emulating contexts, making this an authentic and valid assessment method in subjects where high order cognitive skills need to be combined with practical capability
- They are very widely used across disciplines as being a highly authentic assessment format that gets students to use and apply information meaningfully

What can be the problems
- Whether you use a Harvard-
  a sophisticated technical sim
  require a very high level of pl
  organisation to set-up in the
- If simulations materials are p
  expensive but can be used
  numbers of students
- Simulations are likely to need
  and updating to ensure they
  appropriate, particularly as th
  subjects where high rates of

Putting this method into
- Your key starting points sho
  learning outcomes so you ca
  what particular skills capabili
  behaviours you are setting o
- For paper-based scenarios,
  for individuals to create thes
  team of assessors working o
  likely to create more sophist
  materials
- Simulators for assessing adv
  will need advanced technica
  create and test them out, an
  fairly and validly as assessm
  emulating the actual equipm
  use in live contexts

> *Your key starting points should as always be the learning outcomes so you can clearly decide what particular skills capabilities and professional behaviours you are setting out to test*

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08 Executive Summaries

What are they?
Rather than requiring students to submit lengthy reports on their practice or research outputs for assessment, it can be useful to ask them to produce an executive summary of their work in a strictly word-limited format which comprises a condensed summary of the full report. These are widely used in medical and research contexts, business and professional worlds, science and engineering to enable busy colleagues to rapidly access the main findings. They need to be pithy yet informative, accessible yet informed, and targeted to particular audience.

What are the benefits?
- In civil and professional society, executive summaries are often used to convey information in a concise and well-argued way to make a position clear to politicians, line-managers, research sponsors, potential clients and others
- The ability to take complex, incomplete and sometimes competing information and use it productively to summarise or make a case is a key graduate skill that is much in demand
- Executive summaries are inevitably much faster to mark than full written reports
- Where draft executive summaries are used as an interim element within a report submission, they can provide useful opportunities for formative feedback dialogues.

What can be the problems
- Some students may think th
  short format, they need to p
  submitting a full report, wher
  true; prioritising information a
  a concise format way is a co
  It is a real challenge to sort o
  from background detail and
  the most important areas to
  extraneous detail.

Putting this method into p
- When briefing students abou
  method, it will be useful if yo
  demonstrate how the criteria
  example, it will be more impo
  work to be concise rather th
  in its detail. It may be useful
  range of executive summarie
  of documentation, for examp
  legal proceedings, from parli
  and so on
- Executive summaries need t
  structured to cover an outlin
  being addressed, clarification
  a description of the key findi
  considerations and limitation
  Often, they will include recon
  action.

> *They need to be pithy accessible yet informe to particular audience*

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21 Two-Stage Exams

What are they?
Two-stage exams allow students to undertake exam questions individually, but once they have handed in their exam papers at the end of the designated time, they move immediately into small groups. They then have a set period of time to work collectively on the same questions. The whole group must agree the group output, which they hand in as a single group copy, having added their names and/or student IDs to the second-stage exam paper. The students' first-stage paper usually accounts for a large proportion of the grade, but the second paper also contributes to each student's overall grade.

What are the benefits?
- The second – collaborative – stage of the exam provides students with the opportunity to review and deepen their learning about the academic work they have just undertaken while it is fresh in their minds. By discussing and working through the questions with fellow students, they engage in active learning and feedback processes which significantly boost their understanding of content, concepts and learning processes, as well as clearly highlighting the value of working productively with others
- With careful organisation two-stage exams can work well with large classes
- Pre-selecting groups to include a mix of high- and low-achieving students can be a beneficial approach.

What can be the problems?
- Students may be concerned about issues of fairness, and some may prefer to work individually even in the group-based second stage. To help address this, it is important to implement a clear policy that an individual's overall grade can't be lower than the mark awarded on the first-stage paper: it can only improve. It's also wise to hand out only one copy of the stage 2 exam paper per group to encourage consensus-building discussion

- Two-stage exams take a little more effort to organise and mark. However, in practice this is minimal because students have already seen and tackled the problems, so the time is spent in discussion, and there are fewer scripts to mark at stage two, at which point many errors will already have been ironed out

Putting this method into practice
- Two-stage exams work best with multiple choice questions or problem tasks but not with longer essay style questions or lengthy calculations, as it's necessary to set types of questions that are short enough or structured such that everyone can contribute
- It is important to brief students very clearly so that they appreciate the evidence-based educational benefits and also understand that in practice most groups perform equally or better than individual students
- You should assure students their overall score will not go down through this process and clarify that the majority of the exam score will be given for the individual part, for example, using a weighting of 85% for the individual portion, and 15% for the group portion
- Good organisation, preparation and co-ordination amongst facilitators/invigilators is imperative. The switch between stages can be done in under five minutes as long as you have one facilitator per 50 students, and the two-stage format can be administered in the usual exam time-slot, if you allocate about two thirds of the time to stage one and one third to stage two
- You can, of course, harness the demonstrable learning benefits by using two-stage exams formatively as class quizzes (without the grading element).

> *The second – collaborative – stage of the exam provides students with the opportunity to review and deepen their learning about the academic work they have just undertaken while it is fresh in their minds*

Assessment ideas for an AI enabled world

A menu of ideas to provoke discussion and reflection around assessment approaches in higher education.

Discussion: Assessment redesign for an AI world?

Task:

Imagine you want/need to change one of your assessments. Which of the alternatives suggested in the JISC toolkit appeals to you, and why? In groups of two or three, discuss and debate which options represent the best alternatives.

Prepare some notes on this to share with your table.

[Access the Jisc toolkit here](#)

Responding to Gen-AI through assessment (and curriculum) design

Greater focus on process as well as (or instead of) product

Building in the idea that assessment is for developing well-defined and well-articulated competencies

More performance-based and dialogical assessment formats

Fewer summative assessment points within modules coupled with greater focus on programme level assessment

What else/?

What is Human Intelligence?

Creating: synthesizing ideas. Divergent thinking.

Epistemology: what knowledge is, where it comes from and what good evidence is.

Evaluation of information or ideas based on criteria.

Contextual intelligence: understand we are embodied, seeing and feeling in the world.

Social intelligence: how to work together across disciplines.

Metacognition: self understanding and self-regulation.

Emotional intelligence: communicate with and relate to others effectively and constructively.

In your own time… personal reflection activity

In an AI-enabled world…

- What (human) skills and competencies do students need to demonstrate in through their learning and assessments in your module/programme?

- How does your current teaching and assessment practice support the development of these skills and competencies?

- Could changing your approach to assessment enhance this? If so, how will you achieve this?

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University of Strathclyde Glasgow

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Daily Mail University of the Year Awards

SCOTTISH UNIVERSITY OF THE YEAR
2024
Daily Mail University of the Year Awards

EUROPEAN ENTREPRENEURIAL
UNIVERSITY OF THE YEAR 2023
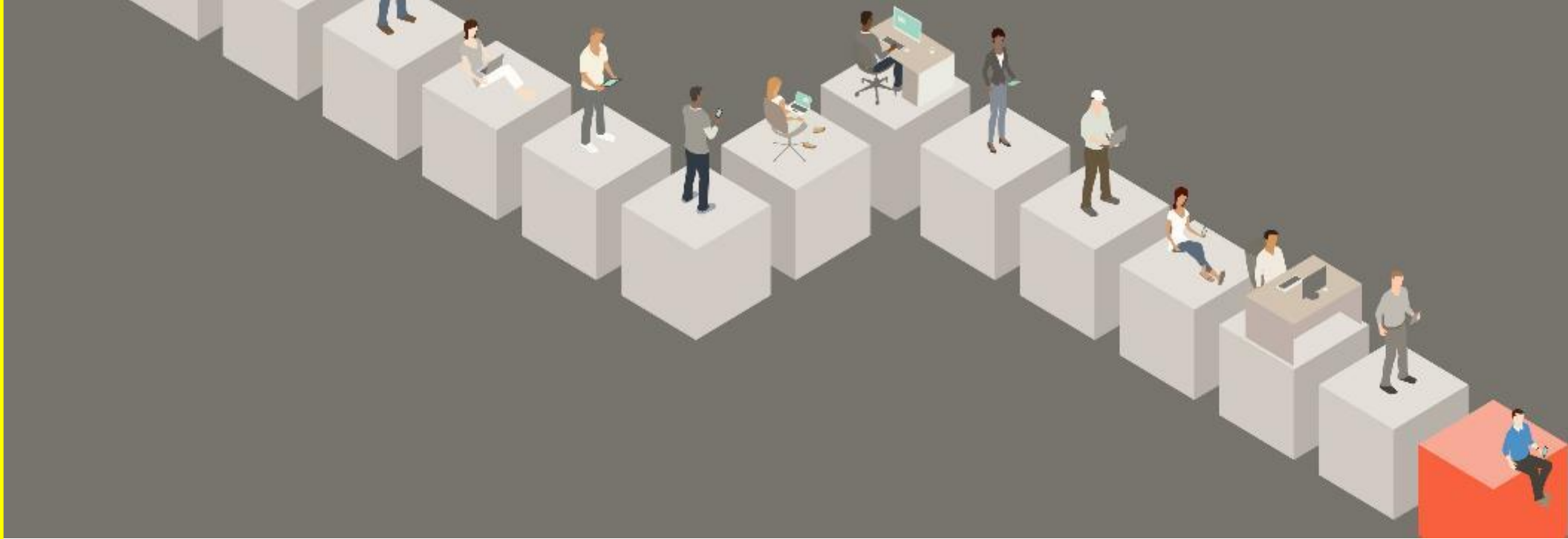Triple E Awards

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Next steps for individuals, programme teams, institutions... and the sector?

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Next steps for individuals, programme teams, institutions. ..and the sector?

Key questions

1. What can *you* do now?

2. What can Departments and Universities do?

3. What would a sector response look like?

What can *you* do next?

TALK: Initiate and participate in discussions with colleagues and students.

READ: relevant work... discipline, sector, specialist work…

PLAN: push for Gen-AI discussions at Department and University meetings.

TEST: experiment with Gen-AI tools.
Start small and build from there

Responding collectively as Departments and Universities

- Ensure meetings/discussions take place at all levels;

- Foster collaborative working;

- Establish focused Working Groups;

- Keep longer-term impacts and change in view;

- Consider ways of joining the dots with other/parallel influences and imperatives;

- Always ensure that local distinctiveness is appreciated and respected – disciplinary differences are going to matter (scale, pace and depth of change is highly variable); and,

- Explore where existing policy covers and where it doesn't – don't need to re-invent the wheel.
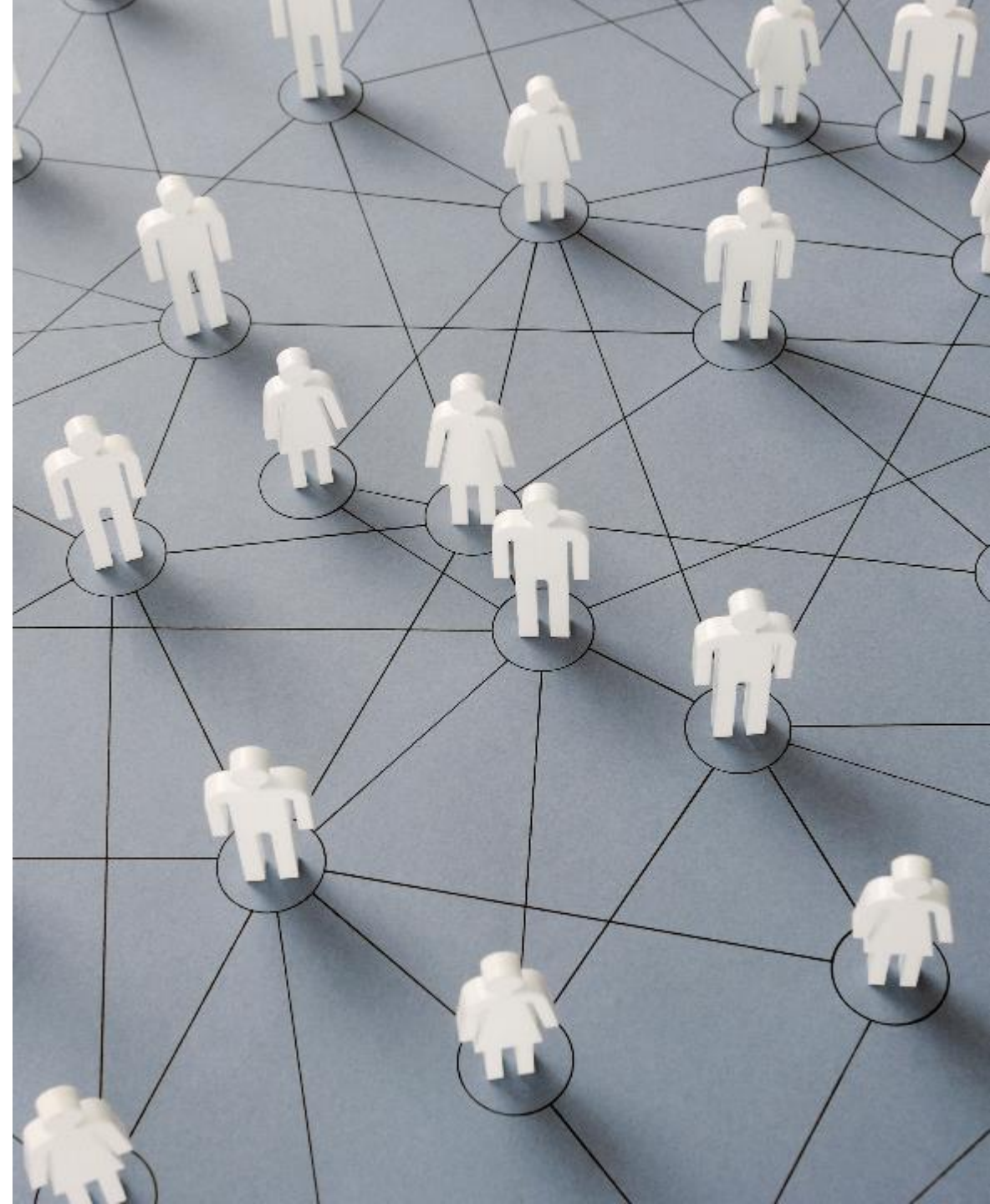
University of Strathclyde Principles on the use of Gen-AI in LTA

01 Equity and fairness

Gen-AI is used in a way that promotes equity and fairness among our students and staff. Any necessary Equality Impact Assessments (EIA) are undertaken to identify and mitigate potential biases or discrimination against any group with a particular focus on protected characteristics (as defined in the Equality Act, 2010).

02 Being people-orientated

Gen-AI is used as a tool to support our students, our staff, and partners across all of our activities. Human oversight is maintained and valued throughout.

03 Transparency

The use of Gen-AI is transparent, and the processes and outcomes are explainable to students, staff, and partners through relevant policies and guidance.

04 Privacy and security

Personal data is protected and managed securely in accordance with relevant laws and regulations. Any necessary Data Protection Impact Assessments will be undertaken.

05 Legal, ethical, and responsible use

Gen-AI is used in legal, ethical, and responsible ways.

06 Sustainability

The use and development of Gen-AI aligns with the University's commitment to addressing the challenges of the United Nations' Sustainable Development Goals.

07 Pedagogy and academic standards

The use of Gen-AI is based on sound pedagogical principles and robust quality assurance processes to provide outstanding teaching and maintain high academic standards.

08 Innovation

The use of Gen-AI is aimed at enhancing creative and innovative approaches and solutions to problems and challenges faced by our students, staff, and partners.

09 Continuous improvement

The use of Gen-AI will be subject to ongoing review, evaluation, and improvement, based on feedback from our students, staff and partners.

Broad categories of appropriate application or use of Gen-AI

Category	Learning & Teaching activities	Assessment activities
1. Not permitted	Not to be used to support any learning activities, (or only essential use such as transcription tools where allowed).	Not permitted (or only approved use of tools such as Grammarly where allowed).
2. Selective	Used in some specific situations to support learning activities.	Used in clearly defined and directed ways as part of the assessment process and correctly attributed.
3. Open	No restrictions and use encouraged to support the learning process where appropriate.	No restrictions but use must be identified as part of the assessment process and correctly attributed.
4. Integral	Understanding, application, and use of Gen-AI are essential Learning Outcomes and embedded in the learning and teaching activities and approaches.	Understanding, application, and use of Gen-AI are essential Learning Outcomes and embedded in the assessment design and marking criteria.

Discussion: Taking a sector approach?

- What is happening at a sector level now?

- What else would you like to see happening?

- Which agencies need to be involved?